

Billing Code 3510-KA-P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration (NOAA)

Publicly Available Biologic and Geologic Samples from the 2015 and 2016 NOAA Ship *Okeanos Explorer* Expeditions

AGENCY: Office of Ocean Exploration and Research (OER), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC)

ACTION: Notice.

SUMMARY: NOAA OER announces the availability of biologic and geologic samples that were collected during NOAA Ship *Okeanos Explorer* expeditions in 2015 and 2016. Biologic specimens from all 2015 and 2016 expeditions are now available for loan through the Smithsonian Institution's National Museum of Natural History. Rock samples collected during the three legs of EX-15-05 are now available through Oregon State University's Marine Geology Repository.

Information about individual samples as well as all imagery and oceanographic data collected during these expeditions can be found in the digital record for each cruise on the OER Digital Atlas, (http://explore.noaa.gov/digitalatlas).

The biologic and geologic samples described in this notice are available immediately from the designated repositories.

FOR FURTHER INFORMATION CONTACT: Mr. Craig Russell, National Oceanic and Atmospheric Administration, 7600 Sand Point Way NE, Seattle, WA 98115, (206) 526-4803, Craig.Russell@noaa.gov.

SUPPLEMENTARY INFORMATION: The specimens listed below were collected by NOAA during seven telepresence-enabled *Okeanos Explorer* ocean exploration expeditions: EX-15-04 Legs 2, 3, and 4 of the "2015 Hohonu Moana: Exploring Deep Waters off Hawai'i" expedition that focused operations within the Papahanaumokuakea Marine National Monument (northwest Hawaiian Islands); EX-16-03 "2016 Hohonu Moana: Exploring Deep Waters off Hawai'i", which also conducted sampling operations within Papahanaumokuakea; EX-16-05 Leg 1 and Leg 3 of the "2016" Deepwater Exploration of the Marianas" expedition that focused operations in and around the Marianas Trench Marine National Monument, Guam, and the Commonwealth of the Northern Mariana Islands; and EX-16-06 "Deepwater Wonders of Wake" expedition that was focused within the Wake Atoll unit of the Pacific Remote Islands Marine National Monument. These expeditions are part of NOAA's 'Campaign to Address Pacific monument Science, Technology, and Ocean NEeds' (CAPSTONE) – a major multi-year effort focused on collecting baseline information in deepwater areas of U.S. marine protected areas in the central and western Pacific.

NOAA OER conducts collaborative and systematic global ocean exploration with NOAA Ship *Okeanos Explorer* to provide lasting benefits for the nation's environmental, economic, and societal needs. Expeditions are planned collaboratively with input from partners and stakeholders and are executed to benefit NOAA, the broader scientific community, and general public. OER ocean exploration expeditions are designed to catalyze follow-on research and to meet management needs.

These expeditions are conducted mainly in unexplored or poorly known areas where high-resolution mapping and initial sampling will result in initial site descriptions. The

rationale that guides sampling during *Okeanos Explorer* expeditions is to enable a general characterization of physical, chemical, and biological environments in the area of interest.

Once the expeditions are complete, samples are cataloged and prepared for archival. Biologic samples are sent for primary archival to the Smithsonian Institution's National Museum of Natural History Research and Collections to provide access to as many researchers as possible. There the samples are taxonomically identified, curated and made accessible through the Invertebrate Zoology Collection. Metadata about the samples and information on how to request samples is available through the museum's online portal (http://invertebrates.si.edu/collections.htm).

During at-sea sample processing, prior to additional preservation techniques such as ethanol or formalin, small tissue samples are preserved onboard for later genomic DNA and RNA extraction at the Ocean Genome Legacy Center (OGL) at Northeastern University. Available materials can be searched, browsed, and requested through the online catalog on the OGL website (http://www.northeastern.edu/ogl/).

Additionally, selected coral and sponge specimens will be subsampled and made accessible through the Bernice Pauahi Bishop Museum's marine invertebrate collection. Descriptions of holdings, a searchable database, loan request forms, and Frequently Asked Questions for specimens are available on the museum's Invertebrate Zoology collection website (http://www.bishopmuseum.org/collections-3/invertebrate-zoology/). Rock samples collected during the three legs of EX-15-04 are archived at Oregon State University's Marine Geology Repository where they have been entered into the Repository's sample library. The Repository provides online metadata about the

samples, images of thin sections, and how to request specimens (http://osu-mgr.org/noaa-

ex/).

Digital records of all Okeanos Explorer sampling operations can be accessed through the

OER Digital Atlas (http://explore.noaa.gov/digitalatlas). Through the Digital Atlas, users

can find the "Collected Specimens" from the Data Access tab of cruises for which

samples were collected. Additional information about the sampling operations and

access to select images of each specimen can be found in OER's Okeanos Explorer Atlas

(http://explore.noaa.gov/okeanosatlas), a GIS application which can be used to access a

point layer of sampling locations. In-situ, close-up, and laboratory images of each

specimen are also available through this Atlas.

All other associated video, oceanographic, and bathymetric data from these expeditions

that provide context for collected samples are also available through the OER Digital

Atlas.

Dated: March 22, 2017.

Paul Johnson

Acting Deputy Chief Financial Officer/CAO

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National Oceanic and Atmospheric Administration

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